ANOTHER LOOK AT *ERAGROSTIS TEPHROSANTHOS* (GRAMINEAE)

John R. Reeder
Herbarium, University of Arizona, Tucson, AZ 85721

The genus *Eragrostis* has perplexed botanists since the time of Linnaeus, who assigned the species to *Poa*. Characteristics which serve to separate species, especially some of the annuals, are rather subtle, and accurate determinations are often difficult for anyone who has not had considerable experience with the group. Koch (1974) made a significant contribution to our understanding of the group of annuals which he studied, submerging three species which had been recognized in the second edition of Hitchcock's Manual (1951), and reducing a fourth to the status of variety. His relegation of *E. diffusa* Buckl. and *E. arida* A. S. Hitchc. to synonymy, merging the former with *E. pectinacea* (Michx.) Nees, and the latter with *E. tephrosanthos* Schult., seems reasonable. Some users of his treatment, however, may consider it still too conservative as they struggle to separate the above two species one from the other and from the closely related *E. pilosa* (L.) P. Beauv.

It is apparent from a perusal of Koch's treatment that his decision regarding whether or not to recognize *Eragrostis tephrosanthos* as distinct from *E. pectinacea* was not an easy one. While he did, indeed, treat these two taxa as distinct species, he informs us that the only difference between the two is that the pedicels of the spikelets are appressed to the branches in *E. pectinacea*, whereas they are spreading to various degrees in *E. tephrosanthos*. He adds that this character in *E. tephrosanthos* is expressed only at maturity, and even then—although infrequently—most of the pedicels on a plant may be appressed; in *E. pectinacea*, he states, the pedicels rarely diverge as much as 20°. He points out that the distributions of these two "species" are coincident over most of the southern range of *E. pectinacea*, and that their chromosome numbers, flowering times, and habitats are the same. Nevertheless, he reports that he found no evidence of hybridization between the two. One may wonder how he can be so confident of this in view of the fact that the one character separating the taxa (appressed vs spreading pedicels) is not absolute. He argues, however, that even though the morphological difference between the two taxa is a "relatively minor one," it was consistent, and he had "little difficulty in separating the two."

Although a number of recent authors have accepted Koch's conclusions without comment, McVaugh (1983) appears to express some skepticism, and suggests that to the "uninitiated" the separation may not be so easy. He cites an example of a specimen in which two recognized authorities (L. H. Harvey and S. D. Koch) did not agree as to whether it represented *E. pectinacea* or *E. tephrosanthos*!

In working with plants of this complex from the southwestern U.S.

and northern Mexico, I have found that the majority have either appressed or spreading pedicels and, therefore, one is able to name them with some confidence. A not inconsiderable number, however, can be determined only in a somewhat arbitrary manner. In view of this, it seems to me that a more satisfactory disposition of these two taxa would be to treat them as varieties of a single species; *Eragrostis pectinacea* has priority.

A search for a varietal name for the "*tephrosanthos*" taxon revealed that the epithets published by Fournier (1886) as varieties of *Eragrostis Purshii* Schrad. have priority in that rank (cf. ICBN, Sydney, 1983. Art. 11.3). The first of these is "*miserrima*," which has a short description and appears to be based on *E. parvula* Steud., which is listed as a synonym. Koch (1974) has examined a type fragment at US, and determined it to be a synonym of *E. tephrosanthos*. The epithet, *miserrima*, therefore, is here selected as the appropriate one to represent the "*tephrosanthos*" taxon when it is treated as a variety of *E. pectinacea*. The correct name for each of the two varieties discussed is given below along with the relevant synonymy. For more complete synonymy, see Koch (1974).

ERAGROSTIS PECTINACEA (Michx.) Nees, Fl. Afr. Austral. 406. 1841.

var. **pectinacea**

Poa pectinacea Michx., Fl. Bor. Amer. 1: 69. 1803.

var. **miserrima** (Fourn.) J. Reeder, comb. nov.

Eragrostis Purshii Schrad. var. *miserrima* Fourn., Mexic. Pl. 2: 116. 1886. (based on *Eragrostis parvula* Steud.)

Eragrostis parvula Steud., Syn. Pl. Glum. 1:277. 1854.

Eragrostis tephrosanthos Schult., Mantissa 2: 316. 1824.

Eragrostis arida A. S. Hitchc., Jour. Washington Acad. Sci. 23: 449. 1933.

LITERATURE CITED

Fournier, E. 1886. Mexicanas Plantas. Pars Secunda. Gramineae. Paris. xix + 160 pp.

Hitchcock, A. S. 1951. Manual of the Grasses of the United States. (2nd ed. revised by Agnes Chase). U.S. Dept. Agric. Misc. Publ. 200. 1051 pp.

Koch, S. D. 1974. The *Eragrostis pectinacea-pilosa* complex in North and Central America (Gramineae: Eragrostoideae). Illinois Biological Monographs 48. 74 pp.

McVaugh, R. 1983. Flora Novo-Galiciana. A descriptive account of the vascular plants of western Mexico. Vol. 14. Gramineae. 436 pp. Ann Arbor: Univ. Michigan Press.